

Chemical Analysis Report

SO-DIST-2020-12-18-01

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **2020 SMP : Big Slough, Popash, Carrell Canal**

Request ID: **RQ-2020-12-14-49**

Customer: **SO-DIST**

Project ID: **SMP**

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FLDEP South District Office
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Date Certified: 11-JAN-2021 09:49



Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Carrell Canal

Collection Date/Time: 12/17/2020 14:55

Field ID: G3SD0167

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2214556	EPA 8321B	2,4-D	0.026		ug/L	P391404	
		Acesulfame K**	0.38	I	ug/L	P391510	
		AMPA**	0.67		ug/L	P391510	
		Sucralose**	0.16		ug/L	P391510	
		Acetaminophen**	0.0080	U	ug/L	P391404	
		Acetamiprid**	0.0020	U	ug/L	P391404	
		Endothall**	0.25	U	ug/L	P391510	
		Glufosinate**	0.10	U	ug/L	P391510	
		Glyphosate**	3.1		ug/L	P391510	
		Afidopyropen**	0.0020	U	ug/L	P391404	
		Bentazon	0.24		ug/L	P391404	
		Benzovindiflupyr**	0.0020	U	ug/L	P391404	
		Carbamazepine**	0.0017	I	ug/L	P391404	
		Clothianidin**	0.0020	U	ug/L	P391404	
		Dinotefuran**	0.0020	U	ug/L	P391404	
		Diuron	0.0037	I	ug/L	P391404	
		Fenuron	0.016	U	ug/L	P391404	
		Fluridone**	0.0028	I	ug/L	P391404	
		Imazapyr**	0.057		ug/L	P391404	
		Hydrocodone**	0.0020	U	ug/L	P391404	
		Ibuprofen**	0.020	U	ug/L	P391404	
		Imidacloprid	0.023		ug/L	P391404	
		Linuron	0.0040	U	ug/L	P391404	
		Mandestrobin**	0.0020	U	ug/L	P391404	
		MCPP	0.0048	I	ug/L	P391404	
		Naproxen**	0.0080	U	ug/L	P391404	
		Primidone**	0.0040	U	ug/L	P391404	
		Pyraclostrobin**	0.0020	U	ug/L	P391404	
		Thiamethoxam**	0.0020	U	ug/L	P391404	
		Tolfenpyrad**	0.0020	U	ug/L	P391404	
		Triclopyr**	0.0040	U	ug/L	P391404	

Ref. Method and Comment:

EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Big Slough Upstream of Butler Park

Collection Date/Time: 12/17/2020 10:25

Field ID: G3SD0174

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2214536	EPA 180.1 Rev. 2.0	Turbidity	4.8	A	NTU	P391456	
	EPA 300.0 Rev. 2.1	Chloride	52		mg Cl/L	P391845	
		Sulfate	81		mg SO4/L	P391848	
		Color (true)	200		PCU	P391463	
	SM 2320 B-2011	Total Alkalinity	87		mg CaCO3/L	P391576	
	SM 2540 C-2011	TDS	317		mg/L	P391868	
	SM 2540 D-2011	TSS	5	I	mg/L	P391766	
	SM 4500 F-C-2011	Fluoride	0.33		mg F/L	P391580	
2214537	EPA 350.1 Rev. 2.0	Ammonia-N	0.052		mg N/L	P391737	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P391714	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P391514	
	EPA 365.1 Rev. 2.0	Total-P	0.30		mg P/L	P391532	
	SM 5310 B-2011	Organic Carbon	23		mg C/L	P391598	
2214538	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.24		mg P/L	P391461	
2214558	EPA 200.7 Rev. 4.4	Barium	13.3		ug/L	P391631	
		Calcium	57.3		mg/L	P391631	
		Iron	1.16E+03		ug/L	P391631	
		Magnesium	14.7		mg/L	P391631	
		Potassium	4.4		mg/L	P391631	
		Sodium	27.8		mg/L	P391631	
		Zinc	5.0	U	ug/L	P391631	
	EPA 200.8 Rev. 5.4	Aluminum	152		ug/L	P391631	
		Antimony	0.077	I	ug/L	P391631	
		Arsenic	1.25		ug/L	P391631	
		Beryllium	0.020	I	ug/L	P391631	
		Boron**	33.2		ug/L	P391631	
		Cadmium	0.020	U	ug/L	P391631	
		Chromium	0.93	I	ug/L	P391631	
		Copper	0.74	I	ug/L	P391631	
		Lead	0.20	U	ug/L	P391631	
		Nickel	0.76	I	ug/L	P391631	
		Selenium	0.20	U	ug/L	P391631	
		Silver	0.010	U	ug/L	P391631	
		Thallium	0.10	U	ug/L	P391631	
	SM 2340B	Hardness	204		mg/L	P391631	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for aluminum, copper and lead are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P391456

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P391631

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P391631

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391845

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391848

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391737

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391714

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P391514

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391532

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P391461

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8321B
Batch ID: P391404

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P391510

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P391463

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P391576

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Reference Method: SM 2540 C-2011
Batch ID: P391868

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P391766

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P391580

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P391598

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P391631

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	108		P	85 - 115
Calcium	103		P	85 - 115
Iron	107		P	85 - 115
Magnesium	107		P	85 - 115
Potassium	107		P	85 - 115
Sodium	111		P	85 - 115
Zinc	98.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P391631

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	102		P	85 - 115
Antimony	97.0		P	85 - 115
Arsenic	94.6		P	85 - 115
Beryllium	101		P	85 - 115
Boron	88.7		P	85 - 115
Cadmium	90.2		P	85 - 115
Chromium	97.7		P	85 - 115
Copper	99.7		P	85 - 115
Lead	97.0		P	85 - 115
Nickel	91.7		P	85 - 115
Selenium	93.6		P	85 - 115
Silver	101		P	85 - 115
Thallium	95.4		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391845

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391848

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	104		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391737

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	95.6		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391714

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	101		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P391514

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391532

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P391461

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	102		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P391404

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	81.4		P	30 - 160
Acetaminophen	70.0		P	30 - 150
Acetamiprid	78.5		P	30 - 160
Afidopyropen	44.7		P	30 - 160
Bentazon	39.2		P	30 - 150
Benzovindiflupyr	68.5		P	30 - 160
Carbamazepine	78.0		P	30 - 160
Clothianidin	85.6		P	30 - 160
Dinotefuran	78.3		P	30 - 160
Diuron	64.8		P	30 - 160
Fenuron	90.8		P	30 - 160
Fluridone	72.5		P	30 - 160
Hydrocodone	84.7		P	30 - 160
Ibuprofen	54.2		P	30 - 160
Imazapyr	76.0		P	30 - 160
Imidacloprid	89.5		P	30 - 160
Linuron	56.5		P	30 - 160
Mandestrobin	69.7		P	30 - 160
MCPP	81.0		P	30 - 160
Naproxen	43.7		P	30 - 160
Primidone	78.6		P	30 - 160
Pyraclostrobin	70.0		P	30 - 160
Thiamethoxam	88.2		P	30 - 160
Tolfenpyrad	43.9		P	30 - 160
Triclopyr	71.7		P	30 - 160

Reference Method: EPA 8321B
Batch ID: P391510

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	110		P	40 - 150
AMPA	66.6		P	40 - 150
Endothall	90.6		P	40 - 150
Glufosinate	97.4		P	40 - 150

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P391510

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glyphosate	94.6		P	40 - 140
Sucralose	94.0		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P391463

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	90 - 110

Reference Method: SM 2320 B-2011
Batch ID: P391576

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.3		P	93 - 104

Reference Method: SM 4500 F-C-2011
Batch ID: P391580

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.7		P	90 - 106

Reference Method: SM 5310 B-2011
Batch ID: P391598

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P391631

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214805	Barium	109		P	80 - 120
2214805	Calcium	106		P	80 - 120
2214805	Iron	111		P	80 - 120
2214805	Magnesium	111		P	80 - 120
2214805	Potassium	109		P	80 - 120
2214805	Sodium	107		P	80 - 120
2214805	Zinc	99.0		P	80 - 120
2214847	Barium	109	109	P/P	80 - 120
2214847	Calcium	105		P	80 - 120
2214847	Iron	108	108	P/P	80 - 120
2214847	Magnesium	108	107	P/P	80 - 120
2214847	Potassium	108	106	P/P	80 - 120
2214847	Sodium	109	105	P/P	80 - 120
2214847	Zinc	98.8	98.8	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P391631

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214805	Antimony	95.1		P	80 - 120
2214805	Arsenic	91.3		P	80 - 120
2214805	Beryllium	99.9		P	80 - 120
2214805	Boron	92.3		P	80 - 120
2214805	Cadmium	90.9		P	80 - 120
2214805	Chromium	94.7		P	80 - 120
2214805	Nickel	90.5		P	80 - 120
2214805	Selenium	88.7		P	80 - 120
2214805	Silver	100		P	80 - 120
2214805	Thallium	98.5		P	80 - 120
2214847	Aluminum	101	98.3	P/P	80 - 120
2214847	Antimony	98.1	99.1	P/P	80 - 120
2214847	Arsenic	94.2	93.1	P/P	80 - 120
2214847	Beryllium	99.7	99.3	P/P	80 - 120
2214847	Boron	87.8	88.9	P/P	80 - 120
2214847	Cadmium	91.4	92.2	P/P	80 - 120
2214847	Chromium	96.8	97.5	P/P	80 - 120
2214847	Copper	103	100	P/P	80 - 120
2214847	Lead	97.3	97.9	P/P	80 - 120
2214847	Nickel	92.5	91.9	P/P	80 - 120
2214847	Selenium	92.0	91.8	P/P	80 - 120
2214847	Silver	101	102	P/P	80 - 120
2214847	Thallium	96.7	98.9	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391845

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2213839	Chloride	102		P	90 - 110
2214346	Chloride	103		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391848

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2213839	Sulfate	104		P	90 - 110
2214346	Sulfate	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P391737

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214327	Ammonia-N	97.8	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P391714

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214543	Kjeldahl Nitrogen	115	112	F/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P391514

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214568	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P391532

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214257	Total-P	100	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P391461

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214569	O-Phosphate-P	104	105	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P391404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214862	Acetaminophen	64.6	72.4	P/P	30 - 150
2214862	Acetamiprid	86.3	89.0	P/P	30 - 160
2214862	Afidopyropen	66.3	70.8	P/P	30 - 160
2214862	Benzovindiflupyr	74.0	76.6	P/P	30 - 160
2214862	Carbamazepine	69.1	74.8	P/P	30 - 160
2214862	Clothianidin	68.4	71.5	P/P	30 - 160
2214862	Dinotefuran	70.4	75.6	P/P	30 - 160
2214862	Diuron	51.3	52.2	P/P	30 - 160
2214862	Fenuron	63.5	64.0	P/P	30 - 160
2214862	Hydrocodone	66.0	67.8	P/P	30 - 160
2214862	Ibuprofen	52.4	46.0	P/P	30 - 160
2214862	Imazapyr	99.7	97.5	P/P	30 - 160
2214862	Imidacloprid	117	122	P/P	30 - 160
2214862	Linuron	53.3	58.4	P/P	30 - 160
2214862	Mandestrobin	69.9	78.7	P/P	30 - 160

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P391404

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214862	MCP	68.9	65.2	P/P	30 - 160
2214862	Naproxen	45.5	57.0	P/P	30 - 160
2214862	Primidone	66.9	67.2	P/P	30 - 160
2214862	Pyraclostrobin	75.4	82.9	P/P	30 - 160
2214862	Thiamethoxam	88.0	89.8	P/P	30 - 160
2214862	Tolfenpyrad	44.9	47.9	P/P	30 - 160
2214862	Triclopyr	68.9	67.5	P/P	30 - 160

Reference Method: EPA 8321B
Batch ID: P391510

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214554	Acesulfame K	88.4	89.1	P/P	40 - 150
2214554	AMPA	74.3	73.8	P/P	40 - 150
2214554	Endothall	134	137	P/P	40 - 150
2214554	Glufosinate	96.2	97.9	P/P	40 - 150
2214554	Glyphosate	75.7	86.2	P/P	40 - 140
2214554	Sucralose	97.6	98.0	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P391580

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214795	Fluoride	98.3	98.3	P/P	94 - 107

Reference Method: SM 5310 B-2011
Batch ID: P391598

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2214708	Organic Carbon	98.0	97.4	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P391456

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214536	Turbidity	1.26	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P391631

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214847	Barium	0.155	Spike	P	0 - 20
2214847	Calcium	1.09	Spike	P	0 - 20
2214847	Iron	0.282	Spike	P	0 - 20
2214847	Magnesium	0.993	Spike	P	0 - 20
2214847	Potassium	1.82	Spike	P	0 - 20
2214847	Sodium	2.01	Spike	P	0 - 20
2214847	Zinc	0.0294	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P391631

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214847	Aluminum	2.71	Spike	P	0 - 20
2214847	Antimony	1.05	Spike	P	0 - 20
2214847	Arsenic	1.19	Spike	P	0 - 20
2214847	Beryllium	0.395	Spike	P	0 - 20
2214847	Boron	1.09	Spike	P	0 - 20
2214847	Cadmium	0.919	Spike	P	0 - 20
2214847	Chromium	0.711	Spike	P	0 - 20
2214847	Copper	2.24	Spike	P	0 - 20
2214847	Lead	0.660	Spike	P	0 - 20
2214847	Nickel	0.673	Spike	P	0 - 20
2214847	Selenium	0.216	Spike	P	0 - 20
2214847	Silver	1.14	Spike	P	0 - 20
2214847	Thallium	2.28	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391845

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2213839	Chloride	0.618	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P391848

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2213839	Sulfate	0.349	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P391737

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214327	Ammonia-N	0.219	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P391714

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214543	Kjeldahl Nitrogen	1.88	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P391514

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214568	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P391532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214257	Total-P	1.43	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P391461

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214569	O-Phosphate-P	0.479	Spike	P	0 - 20

Reference Method: EPA 8321B
 Batch ID: P391404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214862	2,4-D	0.511	Spike	P	0 - 30
2214862	Acetaminophen	11.5	Spike	P	0 - 30
2214862	Acetamiprid	3.09	Spike	P	0 - 30
2214862	Afidopyropen	6.70	Spike	P	0 - 30
2214862	Bentazon	2.10	Spike	P	0 - 30
2214862	Benzovindiflupyr	3.52	Spike	P	0 - 30
2214862	Carbamazepine	7.84	Spike	P	0 - 30
2214862	Clothianidin	4.46	Spike	P	0 - 30
2214862	Dinotefuran	7.05	Spike	P	0 - 30
2214862	Diuron	1.77	Spike	P	0 - 30
2214862	Fenuron	0.698	Spike	P	0 - 30
2214862	Fluridone	8.85	Spike	P	0 - 30
2214862	Hydrocodone	2.68	Spike	P	0 - 30
2214862	Ibuprofen	13.0	Spike	P	0 - 30
2214862	Imazapyr	1.52	Spike	P	0 - 30
2214862	Imidacloprid	4.07	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P391404

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214862	Linuron	9.02	Spike	P	0 - 30
2214862	Mandestrobin	11.9	Spike	P	0 - 30
2214862	MCP	5.46	Spike	P	0 - 30
2214862	Naproxen	22.4	Spike	P	0 - 30
2214862	Primidone	0.433	Spike	P	0 - 30
2214862	Pyraclostrobin	9.57	Spike	P	0 - 30
2214862	Thiamethoxam	2.05	Spike	P	0 - 30
2214862	Tolfenpyrad	6.35	Spike	P	0 - 30
2214862	Triclopyr	2.05	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P391510

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214554	Acesulfame K	0.737	Spike	P	0 - 30
2214554	AMPA	0.602	Spike	P	0 - 30
2214554	Endothall	1.90	Spike	P	0 - 30
2214554	Glufosinate	1.69	Spike	P	0 - 30
2214554	Glyphosate	12.9	Spike	P	0 - 30
2214554	Sucralose	0.475	Spike	P	0 - 30

Reference Method: SM 2120 B-2011
Batch ID: P391463

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214598	Color (true)	5.40	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P391576

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214795	Total Alkalinity	1.90	Sample	P	0 - 8.1

Reference Method: SM 2540 C-2011
Batch ID: P391868

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214378	TDS	1.48	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P391580

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214795	Fluoride	0.0	Spike	P	0 - 2.8

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P391598

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2214708	Organic Carbon	0.338	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Surrogates

Lab Sample ID: 2214556
Field Sample ID: G3SD0167

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	69.8	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.4	P	30 - 160
EPA 8321B	Diuron-d6	48.8	P	30 - 160
EPA 8321B	Endothall-d6	92.0	P	40 - 160
EPA 8321B	Endothall-d6	92.0	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	79.7	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	79.7	P	40 - 160
EPA 8321B	Ibuprofen-d3	49.6	P	30 - 160
EPA 8321B	Primidone-d5	86.2	P	30 - 160
EPA 8321B	Sucralose-d6	31.9	P	30 - 160
EPA 8321B	Sucralose-d6	31.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A102677

Included Lab Sample IDs: 2214536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	101	P/P	95 - 105

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A102678

Included Lab Sample IDs: 2214538

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	98.3	98.0	P/P	90 - 110

Reference Method: SM 2120 B-2011

Run ID: A102679

Included Lab Sample IDs: 2214536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	98.2	P/P	85 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A102695

Included Lab Sample IDs: 2214537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	102	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A102709

Included Lab Sample IDs: 2214536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	92.2	95.8	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A102709

Included Lab Sample IDs: 2214536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	100	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102711

Included Lab Sample IDs: 2214556

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	111	120	P/P	60 - 160
AMPA	90.5	85.6	P/P	60 - 160
Endothall	90.5	99.5	P/P	60 - 160
Glufosinate	98.0	97.4	P/P	60 - 160
Glyphosate	72.2	101	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A102717

Included Lab Sample IDs: 2214537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.7	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A102731

Included Lab Sample IDs: 2214537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.6	99.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A102765

Included Lab Sample IDs: 2214556

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	86.6	91.0	P/P	50 - 150
Acetaminophen	139	133	P/P	60 - 160
Acetamiprid	121	115	P/P	50 - 150
Afidopyropen	108	99.2	P/P	50 - 150
Benzovindiflupyr	115	123	P/P	50 - 150
Carbamazepine	119	106	P/P	60 - 150
Clothianidin	121	118	P/P	60 - 150
Dinotefuran	118	109	P/P	50 - 150
Diuron	128	130	P/P	60 - 160
Fenuron	114	108	P/P	60 - 150
Fluridone	105	114	P/P	60 - 160
Hydrocodone	113	111	P/P	60 - 150
Ibuprofen	74.6	103	P/P	50 - 160
Imazapyr	93.8	84.5	P/P	50 - 150
Imidacloprid	102	108	P/P	60 - 150
Linuron	117	113	P/P	60 - 150
Mandestrobin	114	112	P/P	50 - 150
MCPP	92.2	101	P/P	50 - 150
Naproxen	145	110	P/P	50 - 160
Primidone	113	102	P/P	60 - 150
Pyraclostrobin	114	102	P/P	60 - 150
Thiamethoxam	112	112	P/P	50 - 150
Tolfenpyrad	94.1	101	P/P	60 - 150
Triclopyr	93.5	103	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A102784

Included Lab Sample IDs: 2214537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.3	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A102804

Included Lab Sample IDs: 2214537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A102804

Included Lab Sample IDs: 2214537

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.0	95.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A102805

Included Lab Sample IDs: 2214558

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	96.5	95.9	P/P	90 - 110
Arsenic	94.1	93.6	P/P	90 - 110
Boron	92.4	97.3	P/P	90 - 110
Cadmium	94.1	94.4	P/P	90 - 110
Chromium	98.6	97.6	P/P	90 - 110
Lead	95.0	96.2	P/P	90 - 110
Nickel	91.0	90.4	P/P	90 - 110
Selenium	94.8	93.7	P/P	90 - 110
Silver	99.7	101	P/P	90 - 110
Thallium	97.9	99.7	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A102806

Included Lab Sample IDs: 2214558

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	108	104	P/P	90 - 110
Calcium	103	103	P/P	90 - 110
Iron	104	102	P/P	90 - 110
Magnesium	103	102	P/P	90 - 110
Potassium	105	105	P/P	90 - 110
Sodium	103	105	P/P	90 - 110
Zinc	99.7	95.2	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A102823

Included Lab Sample IDs: 2214558

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.5	103	P/P	90 - 110
Beryllium	98.2	99.6	P/P	90 - 110
Copper	96.8	95.8	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A102826

Included Lab Sample IDs: 2214536

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Sulfate	103	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A102859
Included Lab Sample IDs: 2214556

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	99.7	93.7	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A102877
Included Lab Sample IDs: 2214556

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bentazon	106	95.3	P/P	50 - 160

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery			LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity						1.26	
EPA 200.7 Rev. 4.4	Barium	108	109	109	109			0.155
	Calcium	103	106	105				1.09
	Iron	107	111	108	108			0.282
	Magnesium	107	111	108	107			0.993
	Potassium	107	109	108	106			1.82
	Sodium	111	107	109	105			2.01
	Zinc	98.5	99.0	98.8	98.8			0.0294
EPA 200.8 Rev. 5.4	Aluminum	102	101	98.3				2.71
	Antimony	97.0	98.1	99.1	95.1			1.05
	Arsenic	94.6	94.2	93.1	91.3			1.19
	Beryllium	101	99.7	99.3	99.9			0.395
	Boron	88.7	87.8	88.9	92.3			1.09
	Cadmium	90.2	91.4	92.2	90.9			0.919
	Chromium	97.7	96.8	97.5	94.7			0.711
	Copper	99.7	103	100				2.24
	Lead	97.0	97.3	97.9				0.660
	Nickel	91.7	92.5	91.9	90.5			0.673
	Selenium	93.6	92.0	91.8	88.7			0.216
	Silver	101	101	102	100			1.14
	Thallium	95.4	96.7	98.9	98.5			2.28
EPA 300.0 Rev. 2.1	Chloride	102	102	103			0.618	
	Sulfate	104	104	103			0.349	
EPA 350.1 Rev. 2.0	Ammonia-N	95.6	97.8	98.2				0.219
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	101	115	112				1.88
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	104	102	102				0.0
EPA 365.1 Rev. 2.0	Total-P	102	100	102				1.43
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	102	104	105				0.479
EPA 8321B	2,4-D	81.4						0.511
	Acesulfame K	110	88.4	89.1				0.737
	Acetaminophen	70.0	72.4	64.6				11.5
	Acetamiprid	78.5	89.0	86.3				3.09
	Afidopyropen	44.7	70.8	66.3				6.70
	AMPA	66.6	74.3	73.8				0.602
	Bentazon	39.2						2.10
	Benzovindiflupyr	68.5	76.6	74.0				3.52
	Carbamazepine	78.0	74.8	69.1				7.84
	Clothianidin	85.6	71.5	68.4				4.46
	Dinotefuran	78.3	75.6	70.4				7.05
	Diuron	64.8	52.2	51.3				1.77
	Endothall	90.6	134	137				1.90
	Fenuron	90.8	64.0	63.5				0.698
	Fluridone	72.5						8.85
	Glufosinate	97.4	96.2	97.9				1.69
	Glyphosate	94.6	75.7	86.2				12.9
	Hydrocodone	84.7	67.8	66.0				2.68
	Ibuprofen	54.2	52.4	46.0				13.0
	Imazapyr	76.0	97.5	99.7				1.52
	Imidacloprid	89.5	122	117				4.07
	Linuron	56.5	58.4	53.3				9.02
	Mandestrobin	69.7	78.7	69.9				11.9
	MCPP	81.0	68.9	65.2				5.46
	Naproxen	43.7	45.5	57.0				22.4
	Primidone	78.6	67.2	66.9				0.433

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Pyraclostrobin	70.0	82.9	75.4			9.57
	Sucralose	94.0	97.6	98.0			0.475
	Thiamethoxam	88.2	89.8	88.0			2.05
	Tolfenpyrad	43.9	47.9	44.9			6.35
	Triclopyr	71.7	68.9	67.5			2.05
SM 2120 B-2011	Color (true)	101				5.40	
SM 2320 B-2011	Total Alkalinity	97.3				1.90	
SM 2540 C-2011	TDS					1.48	
SM 4500 F-C-2011	Fluoride	97.7	98.3	98.3			0.0
SM 5310 B-2011	Organic Carbon	97.8	98.0	97.4			0.338

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2214536
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2214558
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2214558
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2214536
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2214536
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2214537
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2214537
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2214537
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2214537
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2214538
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2214556
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2214556
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2214536
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2214536
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2214558
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2214536
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2214536
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2214536
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2214537

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	12/18/2020			12/18/2020 15:42	Yen Ta	2214536
EPA 200.7 Rev. 4.4	12/18/2020	12/22/2020 16:35	Elliott D. Healy	12/28/2020 23:11	Betina Topolski	2214558
EPA 200.8 Rev. 5.4	12/18/2020	12/22/2020 16:35	Elliott D. Healy	12/28/2020 16:42	Alexander Thompson	2214558
	12/18/2020	12/22/2020 16:35	Elliott D. Healy	12/29/2020 11:37	Alexander Thompson	2214558
EPA 300.0 Rev. 2.1	12/18/2020			12/30/2020 05:00	Lipi Saha	2214536
EPA 350.1 Rev. 2.0	12/18/2020			12/27/2020 17:33	Ping Hua	2214537
EPA 351.2 Rev. 2.0	12/18/2020	12/23/2020 15:00	David Boose	12/28/2020 19:14	Julia Storbeck	2214537
EPA 353.2 Rev. 2.0	12/18/2020			12/21/2020 10:15	Beverly Y. Sanders	2214537
EPA 365.1 Rev. 2.0	12/18/2020	12/21/2020 12:50	Yen Ta	12/22/2020 14:54	Benjamin T. Nordmann	2214537
EPA 365.1 Rev. 2.0 dissolved	12/18/2020			12/18/2020 16:42	Ping Hua	2214538
EPA 8321B	12/18/2020	12/21/2020 12:00	Hoor Shaik	12/23/2020 05:46	Juyoung Kim	2214556
	12/18/2020	12/21/2020 12:00	Hoor Shaik	12/24/2020 07:51	Juyoung Kim	2214556
	12/18/2020	12/21/2020 13:00	Rebecca Ware	12/21/2020 17:58	Rebecca Ware	2214556
	12/18/2020	12/21/2020 13:00	Rebecca Ware	12/30/2020 19:51	Rebecca Ware	2214556
SM 2120 B-2011	12/18/2020			12/18/2020 17:23	Benjamin T. Nordmann	2214536
SM 2320 B-2011	12/18/2020			12/21/2020 20:05	Dale L. Simmons	2214536
SM 2340B	12/18/2020			12/28/2020 23:11	Betina Topolski	2214558
SM 2540 C-2011	12/18/2020			12/22/2020 13:52	Yijie Li	2214536
SM 2540 D-2011	12/18/2020			12/22/2020 13:52	Yijie Li	2214536
SM 4500 F-C-2011	12/18/2020			12/21/2020 20:05	Dale L. Simmons	2214536
SM 5310 B-2011	12/18/2020			12/22/2020 03:08	Madeline Gruver	2214537